Previously Filed Information Disclosure Statement

In an Information Disclosure Statement (Form 1449) filed with the Office Action dated December 22, 2001, the Examiner crossed out all of the "other" references that were cited in the parent case. In our response to the first Office Action, it was stated that all of these references were listed on the issued patent, so that copies of these references need not be provide by the Applicant.

Applicant respectfully requests that a copy of the 1449 Form, listing all references that were submitted with the most recent Information Disclosure Statement filed on **March 8, 2002**, be marked as being considered and initialed by the Examiner, and returned with the next official communication.

§112 Rejection of the Claims

Claims 17-19, 22, 23, 25-27, 29, and 31-50 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended claims 17-19, 22, 23, 26, 31, 33-38, 40, 41 and 43 to make the terminology used therein more consistent with that used in the specification. In particular, the Applicant believes the Examiner was confused by how the terms "first source/drain region," the "second source/drain region," were introduced in the claims, as compared to how these terms were introduced in the specification on page 6, line 10, to page 7, line 13.

In the amended claims, the "first source/drain region" corresponds to first source/drain region 106, and "second source/drain region"corresponds to second source/drain region 110. In addition, the "first plate" is identified by a new reference number 110' that shows the first plate as being "integral with" (i.e., coextensive with) second source/drain region 110. Further, the "second plate" is the plate identified by reference number 120.

With these clarifying amendments, Applicant believes the indefiniteness issue is once and for all resolved. In the last Office Action, the Examiner states that he was unclear as to how the "second" plate 120 would be "integral" with the "first" source and drain region 106. This is because it is actually ***first plate 110'*** that is "integral with" ***second source/drain region 110*** , as

stated in the specification on page 6, lines 27-28. This point is clarified in the proposed amended drawing for FIG. 1.

Thus, second source/drain region 110 also serves as a first plate 110', which is capacitively coupled to second plate 120. First plate 110' and second source drain region 110 are "integral with" each other, i.e., they are one structure that serves two different functions simultaneously– i.e., the structure serves as both a plate of a capacitor and as a source/drain region of a transistor. Such an arrangement leads to a "conducterless" electrical connection between the capacitor and the transistor because part of the transistor is also part of the capacitor. This obviates the need for a separate electrical contact, as required by the prior art.

In view of the above, the Applicant respectfully request withdrawal of the rejection of the claims under 35 USC § 112, second paragraph, as being indefinite.

§103 Rejection of the Claims

Claims 17-19, 22, 23, 26, 27, 29, and 31-50

Claims 17-19, 22, 23, 26, 27, 29, and 31-50 were rejected under 35 USC § 103(a) as being unpatentable over Wen '509. However, the Applicant respectfully submits that the Examiner has yet to establish a *prima facie* case for obviousness as to the claimed invention.

The Examiner points out in the latest Office Action on page 4, third paragraph, that the combination of the cited references yields a typical memory cell like that of Pfiester '385, Forbes et al. '618 and Wahlstrom '452, with a textured polysilicon stacked trench capacitor as taught by Wen.

However, Applicant's claimed invention includes the following limitation:

> a second plate of polycrystalline material formed in the trench that is coupled to first plate integral with the second source/drain region thereby forming a conductorless electrical connection between the trench capacitor and the transistor...

Applicant's claimed invention has a novel structure that allows for a conductorless electrical connection between the trench capacitor and the transistor.

The above-cited claim limitation is nowhere to be found, taught, or even suggested by any of the cited references, so that any combination thereof simply does not yield Applicant's claimed invention. Accordingly, Applicant respectfully submits that a *prima facie* case for obviousness has not been made with respect to the rejected claims, and therefore respectfully requests withdrawal of the rejection.

Claim 51

Claim 51 was rejected under 35 USC § 103(a) as being unpatentable over Pfiester '385 ("Pfiester") in view of Wen '509 ("Wen").

Wen discloses a trench capacitor having a textured polysilicon surface (114) on the trench inner surface (112). A capacitor dielectric layer (116) separates the textured polysilicon surface from doped polysilicon fill (118), which serves as the second electrode and which has non-textured surfaces, as shown in FIG. 3, as well as in FIGS. 7 and 11.

Applicant has amended claim 51 to indicate that both the first plate and the second plate have micro-roughened surfaces, as indicated in FIG. 6.

Accordingly, Applicant respectfully submits that claim 51 is patentable over Wen and Pfiester and requests withdrawal of the rejection and allowance of claim 51.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Joseph Gortych, at 802 660-7199 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 8/6/2002 By _____
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Box RCE, Commissioner of Patents, Washington, D.C. 20231, on this 6th day of August, 2002.

Name Amy Moriarty Signature _____